

DMR
PREDATOR CONTROL PROJECT

Objectives:

- ★ Remove the European green crabs (*Carcinus maenus*) and predatory milky ribbon worms (*Cerabratuls lacteus*) from the harvesting area, and document biological data (biomass removed, carapace width, sex).
- ★ Monitor temperature at the study site using a Hobo temperature data logger to record continuously throughout the project period.
- ★ Measure any changes in sediment pH through monitoring stations before, during, and at the end of the project period.
- ★ Establish multiple treatment sites within the project area to assess impacts on clam survival and natural spat retention (control, netting retention, roughed-once, roughed-weekly).
- ★ Perform pre-closure and post-closure survey of *Mya arenaria* in the project area to document clam survival and spat retention.

Methods:

- ★ Volunteer commercial harvesters will set and tend crab traps that have been purchased by the Town of Harpswell twice per week, increasing the frequency of hauling if and when crabs begin to fill the traps to capacity upon hauling. Traps will be focused on the outer (seaward) edge of the pilot project area, arranged in a line, in lieu of predator fencing. Biological data (weight, carapace width, sex) will be collected and compiled by the Harpswell Marine Resource Coordinator.
- ★ Volunteer commercial harvesters will remove milky ribbon worms by hand from the project area at the beginning of the study. Biological data (weight, condition of milky ribbon worms) will be collected and compiled by the Harpswell Marine Resource Coordinator.
- ★ Hobo data logger will be affixed to one of the crab traps in a central location to continuously collect temperature data throughout the study period, which will be uploaded and analyzed at project completion.

- ★ Volunteer commercial harvesters and the Harpswell Marine Resource Coordinator will establish treatment sites in the project area as follows:
 - 10 x 20' "control" area, marked with stakes at the corners.
 - 10' x 20' "netting retention" area, using a standard aquaculture- grade 30% shade cloth, marked with stakes at the corners.
 - 10' x 20' "roughed once" area, marked with stakes at the corners; this area will be roughed one time at the onset of the project, then left undisturbed.
 - 10' x 20' "roughed weekly" area, marked with stakes at the corners; this area will be roughed every week during the project period.
- ★ All remaining mud in the project area will be allowed to rest, undisturbed, for a period of six months.
- ★ Community volunteers and commercial shellfish harvesters who have received training will perform the pH measurements, using the standard method established by the Friends of Casco Bay, at established fixed sample stations throughout the project study area, to include all treatment areas as well.
- ★ Commercial shellfish harvesters will work with DMR staff (per DMR email correspondence) to perform shellfish survey work at the beginning and end of the project period.
- ★ The Harpswell Marine Resource Coordinator will supplement labor for any task in which volunteer efforts become unreliable.
- ★ The Harpswell Marine Resource Coordinator will be responsible for the collection, review, and analyses of all data generated by the project, and will prepare a final report at the end of the project period.